

Dr. Program Manager—Rx Program

Real Symptoms or Transitory Discomfort?

DANIEL KNAPP

Program Managers—as do medical doctors—see symptoms of problems every day. And as with medical doctors, “Dr. Program Manager” must understand symptoms and take quick action before the disease threatens the patient. Medical doctors seldom encounter new diseases; neither do Program Managers.

You just learned from your prime contractor that it cannot furnish data from one of its subcontractors—data you both needed and expected to leverage as reusable information. The contractor's prognosis: bad news for schedule and cost. Further, your prime contractor's Program Manager paints a dark picture about the company's ability to meet schedule while looking for alternate data sources.

How did this happen? It came straight out of the blue—right? Not likely.

Early Warnings

Acquisition programs develop maladies that interfere with their happy and healthy lives. As with living creatures, acquisition programs exhibit early symptoms of their sickness that Dr. Program Manager may observe and treat before these symptoms evolve into life-threatening diseases.

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This article will explore eight symptoms of acquisition program ills and prescribe treatments that you, the Program Manager, might administer. Far from a negative view of the busi-

ness of acquisition program management, this article proposes the predictability of program illnesses and shows that their treatments come from

medication already resident in the Program Manager's toolbox.

Programs from birth to death display predictable symptoms from which we foretell future sickness. For the Program Manager, as with the medical doctor, our jobs focus on the 5 percent of the program that does *not* go right. The good news: as with doctors, we seldom see *new* sicknesses.

Frequently
Encountered Acquisition
Program Illnesses
People and programs display predictability. We know what to do when we see the symptoms. However, the essential question is twofold: which symptoms will emerge and in what order will they appear?

1
**WEAKNESS IN PROPOSAL
FOLLOW-THROUGH**
In your Request for Proposal (RFP) and the ensuing proposal, you probably anticipated reuse of certain software and data from preceding pro-

gram assistance in obtaining data that it planned to acquire on its own.

At first examination, you expect the contractor to do what he or she needs to do to obtain the software or data. On further examination, you realize the contractor bid (at government urging) with full expectation of data or software reuse.

Cure: Nothing comes easy or free. Look into an Associate Contractor Agreement (ACA) between the contractor owning software or data rights and the contractor needing the software or data. The sooner you put the ACA in place, the sooner data will flow. An ACA will facilitate later data requirements as well as current requirements.

2
**RASH OF ATTACKS UPON YOUR
PROGRAM FUNDING**
True enough, all programs experience close funding scrutiny. Solid Program Manager effort can protect your funding under normal conditions. Once you project a schedule slip or cost overrun, you exit normal conditions.

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toring, can pinpoint program slips and cost overruns. The only question is, when will you begin to take action?

This rash can quickly turn into a cancer. As with a cancer, the first inclination is to deny; the second to assume it will cure itself. After we exit the third stage—anger—we begin to share the information with others who need to know. Only then can we enter the fourth stage—dealing with the problem.

3
LOSS OF A KEY BODY PART
Your team consists of solid performers. Some of these solid performers will leave the program, usually at the worst possible time. Don Shula, in *Everyone's a Coach*, discusses his experience with the Baltimore Colts when the starting and backup quarterbacks went down. During the playoffs, he had to go with his starting halfback as quarterback. In other words, he adapted to what the halfback *could* do—not what he *would* have done with a real quarterback. Likewise, anticipate the loss of key team members in your program and how you will fill the positions. Build your contingency plan by using a replacement's strengths and adjusting the roles of other team members to fill the void.

While you may not lose your most vital team member—if such a person exists—you must plan on losing one or more team members. Plan for it—and deal with it. Your first action, however, is to instill in newcomers the overall *program* vision, and in the process, help them discover and achieve their own *personal* vision.

4
**FATTENING OF THE USER
REQUIREMENTS**
User representatives will want to expand your program requirements. That's a given. Also a given—they will *not* bring funding to pay for the expanded requirements. The first and most visible symptom of this sickness is triggered by the replacement of a key user representative. New players will want to adjust the requirement. In the second, though less visible symptom, users dwell on ini-

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grams. This reuse reduced your program risk, cost, and schedule estimates. After contract award, you may find that the government did not purchase reuse rights to the anticipated software and data. The first symptom of this sickness will come, as described in the opening vignette, when the contractor asks for govern-

ment assistance in obtaining data that it planned to acquire on its own. Course, we learned that no program had ever recovered once it deviated 15 percent from its Cost/Schedule Status Report (C/SSR) Baseline. Regardless of the contractor's good intentions and verbiage, you will probably suffer the same fate.

Good program metrics such as C/SSR, coupled with careful schedule moni-

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Studies over the past 10 years have highlighted the difficulties in transferring technology from research laboratories to development organizations. In 1999, the Deputy Under Secretary of Defense (Science and Technology) sponsored the development of an automated tool to facilitate technology transition. The Virtual Technology Expo (VTE) went into production in October 2000. Designed to advise the Requirements and Acquisition communities of new technology developments, the VTE contains descriptions of technology advancements and points of contact for obtaining more detailed information.

The technology database is provided as a restricted service through the World Wide Web (<https://vte.dtic.mil>). While the database is currently available, upon registration, only to U.S. government employees and their contractors, an enhancement will soon be completed to protect several levels of information sensitivity. At that time, access will be expanded to include industry, academia, and international technology partners.

VTE users may locate information by selecting Defense Technology Areas or Joint Warfighting Capabilities; by searching the text of technology descriptions for specific criteria; or by finding the organization or point of contact for research projects. Likewise, they may submit technology project descriptions along with multimedia documents, presentations, pictures, diagrams, and videos.

Communication is key! With the participation of the Science and Technology, Requirements, and Acquisition communities, the VTE can expand its database of information to include many sources of technology research. This consolidated database should enable users to:

- Plan for future technology upgrades.
- Monitor commercial technology and product development.
- Find technologies that may enhance military capabilities.
- Choose which technologies to leverage and which to develop with their own resources.
- Develop and refine requirements.
- Prepare analysis of alternatives assessments.
- Showcase research efforts to a wider audience.

For additional information, send an email to vte_help@dtic.mil.



tial needs traded out when you planned the program baseline in light of financial reality. Users will immediately campaign to revisit the deleted needs to any sympathetic audience. Watch for user attempts to include these previously deleted system needs into the Initial Operational Test and Evaluation test criteria.

One approach to mitigating the user-fattening acquisition program requirements: simply ask user representatives what must transpire to satisfy the requirements spelled out in the general need statement. Sometimes the answer is stunningly simple. Their words may not convey the same idea to them as to you.

One user's representative complained loud and long that the program wasn't willing to provide needed logistics support to a system we were fielding. He registered this complaint in spite of millions of dollars of support materials. When asked what he thought he needed that he wasn't getting, the answer was that he needed a circuit logic tester.

Logic tester was added—user representative beamed. Life should always be so tough.

5

TRANSITION TO A SPECIALIST

Regardless of how the acquisition contract has proceeded, transition from the known development contractor to life cycle support raises trauma. No one else can support like "our contractor" (yes, this same contractor who was late on delivery, exceeded the budget, and had to receive waivers for two key technical capabilities).

Symptoms of hardening of the transition include the plan for additional post-delivery development or pre-planned program improvements initiated as a block development for delivery after system acceptance. Planning for life cycle support could include a transition period to either organic or contract support. If you plan to use a support contractor, consider the use of the ACA

clause discussed earlier. If you have a program without the ACA, consider negotiating it into your next contract modification.

6

HEART TRANSPLANT

Most programs today rely considerably on commercial hardware. This commercial hardware seldom comes with assurance of the Reliability, Availability, and Maintainability (RAM) we expect in military systems. Your trade-off is a higher risk for technology and the low cost of commercial hardware, along with the life cycle cost reductions.

The fact remains that most cutting-edge technical development is no longer conducted for the military. For our program, we want the most forward-looking technology on the planet—accompanied by all the testing and RAM data expected of a mature fielded system. When we decide to use commercial hardware, we make a tacit decision to accept commercial standards.

Symptoms of sickness include a challenge to the ruggedness of component hardware, concern for configuration control of component hardware, and questions about the vendor contractor's ability to provide spare, repair, and replacement hardware into the future.

This concern is a sham. The government never knows about future configuration control, vendor support into the future,

or upgrades to current capability having a downward compatibility with current hardware. The crux of the matter involves a cost vs. risk trade-off. A decision to spend more for development using militarized hardware has a multiplicative cost effect over the life cycle of the system.

7

SOFTWARE DEVELOPMENT GESTATION

A mother needs nine months to gestate a human baby. Nine well-motivated mothers working closely together cannot gestate in one month. Likewise, software development always takes more time than you desire. The fact that a contractor proposes completion of software development in a shorter time so as to comply with your RFP does not change the actual development time required.

The first symptoms of software term extension will include slippage of "inchstones," while holding major milestones constant with the intent of making up time in some creative way—usually called thinking "out of the box." The box in this case consists of bypassing some constraint of the Software Capability Maturity Model (CMM). Compliance with this CMM probably influenced your contractor selection procedure in the first place.

The Rx for software term extension must occur with the very first inchstone slippage. Take this first slippage seriously

in spite of assurances from both the government and contracting teams that they can make up the slip—they probably can't. Workarounds such as going to block testing with whatever capability is available on a pre-specified date do not alter the fact that you are behind schedule.

8

PATIENT LOSES INTEREST IN LIFE

The user and user representative campaigned for the system with all its accompanying capabilities. Despite their initial enthusiasm, some users lose interest in a program after program initiation. This can happen when a key proponent retires or transfers. Their backfill may lack the commitment of the predecessor. Every program needs a user champion. If you lose the champion, you will likely lose the program.

Symptoms of this disease include the transfer or retirement plans of your champion. In addition, note when the champion cannot participate in program decisions at a previous commitment level. The champion may have a new pet project to push. The champion may lobby for more of the features traded out that we discussed in Fattening of User Requirements.

Recruit champions! From the start, broaden your base of program support by bringing in user representatives to observe prototype testing. Invite them to program updates. Start to build a sense of ownership in a wider range of users.

With the Right Treatment, the Prognosis is Good

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Editor's Note: The author welcomes questions or comments on this article. Contact Knapp at Dan_Knapp@stri.com.army.mil.

Inside DAU-DSMC

Retired Army Col. Joseph E. Johnson became the Director, Strategic Planning Action Group, effective Dec. 16, 2001. Prior to his retirement from military service, Johnson served as Dean of College Administration and Services, DSMC, and more recently as Director, Administration and Services, DAU, from April 1998 to December 2001. He came to the University from his former position as Commander, Defense Contract Management Command, Baltimore-Manassas. A graduate of Washington and Lee University, Johnson holds an M.S. in Contract and Acquisition Management from Florida Institute of Technology. In addition to the U.S. Army War College, he is a 1993 graduate of DSMC's Program Management Course.

